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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,922	08/25/2003	Masami Makino	031057	1951

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WASHINGTON, DC 20006

EXAMINER

SAMS, MATTHEW C

ART UNIT	PAPER NUMBER
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2617

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/646,922	<b>Applicant(s)</b> MAKINO ET AL.	
	<b>Examiner</b> Matthew C. Sams	<b>Art Unit</b> 2617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

### ***Information Disclosure Statement***

2. The information disclosure statement filed on 11/30/2005 has been considered. An original copy or a translation of the Japanese Office Action has not been received.

### ***Response to Amendment***

3. Claims 5-7 have been added.
4. The indicated allowability of claims 2-4 is withdrawn in view of the newly discovered reference(s) to the cited prior art document (59-78654). Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kweon et al. (US-6,925,313 hereafter, Kweon) in view of the cited prior art document 59-78654, hereafter document 59-78654.

Regarding claims 1 and 2, Kweon teaches a foldable electronic device (Fig. 1 [10] & Fig. 2 [20]) comprising a main body (Fig. 1 [10A]), a closure (Fig. 1 [10B]), a main display (Fig. 1 [12]), a subdisplay (Fig. 2 [22B]), a frame (Fig. 3 [24]), a chip mount area extending from the main display (Fig. 3 [27]) and a chip mount area extending from the subdisplay (Fig. 3 [28]). Kweon teaches the main body (Fig. 1 [10A]) and the closure (Fig. 1 [10B]) being connected to each other openably (Fig. 1 & 2), with the main display (Fig. 1 [12]) having a screen exposed from an inner surface of the closure (Fig. 1) and the subdisplay (Fig. 2 [22B]) having a screen exposed from the back surface of the closure (Fig. 2), the frame (Fig. 3 [24]) being provided inside the closure (Fig. 5 [21, 22 & 24] and Col. 2 lines 48-50) and securing the main display and the subdisplay as arranged back to back (Fig. 1, Fig. 2, Fig. 3 and Col. 2 lines 40-42) with the chip mount areas being opposed to each other in an opening formed in the frame (Fig. 3) with the opposed surfaces of the respective chip mount areas having groups of electronic chips mounted thereon. (Fig. 3 [27 & 28] & Fig. 5) Kweon teaches the chip mounting surfaces has a folded-over portion opposed to the frame and providing the chip mounting area. (Fig. 3 [28]) Kweon differs from the claimed invention by not explicitly reciting the groups of electronic circuit chips are positioned in a staggered relation to each other and mounted on flexible leads.

In an analogous art, document 59-78654 teaches a flexible circuit board where taller and shorter groups of chips are mounted in a staggered relation to each other. (Claim 1, Page 3 lines 10-20 and Fig. 3) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the LCD mounting arrangement of Kweon after modifying it to incorporate the flexible chip mounting surface and the staggered chip-mounting pattern of document 59-78654. One of ordinary skill in the art would have been motivated to do this since making portable electronic devices thinner allows them to be more convenient for the consumer to carry.

Regarding claim 3, Kweon in view of document 59-78654 teaches a foldable electronic device with a frame that has an opening in a second area (Fig. 3 [24]) adjacent to a first area covered with the subdisplay and the flexible lead extending from the subdisplay is folded over on the second area with the electronic chips in the chip mount area being positioned in the opening of the frame. (Fig. 3)

Regarding claim 4, Kweon in view of document 59-78654 teaches a flexible lead (Kweon Fig. 3 [25 & 27] & document 59-78654 Fig. 3) extending from the main display (Fig. 3 [27]) is folded over toward the frame side and folded-over lead portion has a surface opposed to the frame and providing the chip mount area, the electronic circuit chips in the chip mount area being positioned in the opening of the frame. (Fig. 3)

Regarding claim 5, Kweon in view of document 59-78654 teaches a flexible lead (Kweon Fig. 3 [25 & 28] & document 59-78654 Fig. 3) extending from the subdisplay (Fig. 3 [28]), has an outer end folded over toward the frame side and folded-over portion has a surface opposed to the frame and providing the chip mount area. (Fig. 3)

Regarding claim 6, Kweon in view of document 59-78654 teaches a foldable electronic device with a frame that has an opening in a second area (Fig. 3 [24]) adjacent to a first area covered with the subdisplay and the flexible lead extending from the subdisplay is folded over on the second area with the electronic chips in the chip mount area being positioned in the opening of the frame. (Fig. 3)

Regarding claim 7, Kweon in view of document 59-78654 teaches a flexible lead (Kweon Fig. 3 [25 & 27] & document 59-78654 Fig. 3) extending from the main display (Fig. 3 [27]) is folded over toward the frame side and folded-over lead portion has a surface opposed to the frame and providing the chip mount area, the electronic circuit chips in the chip mount area being positioned in the opening of the frame. (Fig. 3)

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Sams whose telephone number is (571)272-8099. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MCS

4/26/2006



**LESTER G. KINCAID**  
**SUPERVISORY PRIMARY EXAMINER**